

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A mobile receiver apparatus comprising:

a directivity variable antenna including a plurality of antenna elements;

an antenna controller connected with the directivity variable antenna for controlling the directivity of said antenna; and

an optimum directivity calculator coupled to the antenna controller for calculating a pattern for the directivity of the antenna by determining (1) whether to align the plurality of antenna elements in one direction so that antenna directivity is in said direction and (2) whether to align at least one of the plurality of antenna elements in a direction different from at least another one of the plurality of antenna elements so that antenna directivity is omni directional;

wherein the optimum directivity calculator includes:

a current position detector for detecting the current position of the mobile; and

a geographic data storage for storing geographical features which have respective height components in proximity to the current position of the mobile; and

the pattern for the directivity of the antenna is further calculated by a combination of the current position of the mobile and the stored geographical features.

2. (Original) A mobile receiver apparatus according to claim 1, wherein the antenna controller is arranged to conduct its control action over the directivity variable antenna in guard intervals which are assigned by an applicable digital broadcast system.

3. (Currently Amended) A mobile receiver apparatus according to claim 1,

wherein the optimum directivity calculator comprises at least:

a directivity calculator;

~~a current position detector for detecting the current position of the mobile;~~

a broadcasting tower position retriever for detecting the position of a broadcast tower; and

~~a geographic data storage for storing the geographic data about the current position;~~

wherein the directivity calculator calculates an optimum pattern of the directivity for improving the response to a desired broadcast signal from the positional relationship between the mobile and the broadcasting tower further determined by ~~a combination of the current position detector and the position of the broadcast tower position retriever and the environment for broadcast signal reception estimated by a combination of the current position detector and the geographical data storage~~; and

wherein the antenna controller conducts the control action over the directivity variable antenna corresponding to the output of the directivity calculator.

4. (Original) A mobile receiver apparatus according to claim 1,

wherein the optimum directivity calculator comprises at least:

a directivity control data retriever;

a current position detector for detecting the current position of the mobile; and

a directivity control data storage for storing a directivity control data determined from the current position or the geographic data about the current position;

wherein the directivity control data retriever examines the current position of the mobile received from the current position detector to retrieve a corresponding directivity control data from the directivity control data storage; and

wherein the antenna controller conducts the control action over the directivity variable antenna.

5. (Original) A mobile receiver apparatus according to claim 4, wherein the directivity control data storage is connected with a broadcast signal receiver or communicator for receiving directivity control data via the broadcast signal receiver or communicator to update or modify the directivity control data assigned to the current position or the geographical features.

6. (Original) A mobile receiver apparatus according to claim 1,

wherein the directivity variable antenna is connected at the output to the optimum directivity calculator; and

wherein the optimum directivity calculator is arranged to calculate an optimum pattern of the directivity using an output of the directivity variable antenna.